**Respirators (Isolating Breathing Apparatus) with a mask and a mouthpiece**

**Technical Specifications**

1. Protective action time: no less than4 hours;
2. Oxygen container volume: 2dm3;
3. Pressure in the container: 200kgf/cm2;
4. Oxygen amount in the container: 400 dm3;
5. Weight of chemical absorbent: no less than 2,3 kg;
6. Oxygen supply: 1,4 ± 0,1 dm3/min;
7. Breathing bag volume: 5,5 ± 0,5 dm3;
8. Overall dimensions no more than, mm:

* Length: 450±5;
* Width: 375±2;
* Height: 165±5.

1. Respirator weight no more than:

* Without chemical absorbent, oxygen, mask: 8,8 kg;
* Without the cooling element, charged: 11,8 kg;
* With the cooling element, charged: 12,6 kg.

The respirator should be provided with the mouthpiece.

Must meet the SKTB.02.CK5.00.00.000 and TY 3299-016-95663625-2018 standard

**Quantity: 27 pieces**

**Devices for Checking Respirators (Isolating Breathing Apparatus)**

**Main Technical Specifications**

1. Mode of working:

* Duration of one cycle: 5 to 30 min;
* Interval between the cycles: no less than 5 min.

1. Continuous working time in the multiple cycle mode during 24 hours: no more than 7 hours.
2. Overall dimensions, no less than:

* Height: 220 mm, width: 460 mm, length: 480 mm.

1. Mass without connectors/adaptors: no more than 15 kg;
2. Power feeding parameters:

* Alternating current voltage: 220±15 kw;
* Alternating current frequency: 50±5 Hz.

1. Utilization power: no more than 230 kw;
2. Terms of utilization:

* Ambient temperature: from +15 to +25 oC;
* Relative humidity (without moist condensation): 30%- 80%;
* Atmospheric pressure: 84- 106,7KPa.

1. Average service period: 9 years.

* Average working time/period 16240 hours.

**Technical Parameters**

1. Range of excessive pressure discharge measuring: 2,8- 6,8K Pa;
2. Withinthe limits of acceptable measuring deviation of excessive pressure discharge % of the range of measuring: ± 0,5;
3. Range of expenditure figures according to the oxygen channel: 0 – 6 dm3/min;
4. Range of expenditure measuring according to the oxygen channel: 1 – 6 dm3/min;
5. Acceptable error limits according to the oxygen channel,% of the upper margin of measuring:

* Within the range of 1,0- 3,0 dm3/min inclusive of the latter value±2,0;
* Within the range of 3,0- 6,0 dm3/min inclusive of the latter value ±3,0.

1. Range of expenditure figures according to the air channel: 0 – 150 dm3/min;
2. Range of expenditure measuring according to the air channel: 10- 150 dm3/min;
3. Acceptable error limits according to the air expenditure channel: % ± 5,0 of the upper margin of measuring.

Must meet the Standard – TY 3299-016-95663625-2018

**Quantity: 2 pieces.**

**Oxygen Pumping Compressor**

1. Average capacity: no less than 160 dm3/min;
2. Maximum working pressure: 25-250 kgf/cm2;
3. Minimum working pressure: 2-20 kgf/cm2;
4. Number of cylinders: 2;
5. Number of pressing steps: 2;
6. Pressure increase level: 10;
7. Plunger diameter:

* Stage one – 20 mm;
* Stage two – 12 mm;

1. Plunger movement - 30 mm;
2. Electric engine:

* Type: asynchronous;
* Voltage: 220-380 W; power - 3 kw;
* Feeding network frequency: 50 Hz.

1. Water discharge: 15- 40dm3/min;
2. Plunger lubricant: (10-50)% glycerin solution in distilled water;
3. Crank rocker mechanism lubrication industrial oil: H-30A;
4. Overall dimensions, no more than mm;

* Length: 620±5;
* Width: 638±5;
* Height: 622±5.

1. Mass: no more than 150 kg.

Must meet the TP 28.13.28-017-95663625-2018 standard.

**Quantity: 1 piece.**

**Gas Analyzer N1**

A portable gas meter, which ensures determination of the **CH4**, **O2**, **CO**, **H2S** concentrations in the air of a mine.

* Dimensions, no more than: length 130mm, width 48 mm, height 44 mm
* Weight, no more: 220-250 g
* Operation temperature limits: -200C +50 0C;
* Pressure: 70-130 KPa;
* Relative humidity: 10-95%;
* Protection class: IP 67;
* Alarm signal: visual 3600; audio – no less than 90 db;
* Duration of operation no less than: 12 h.
* Charging time: 4h

Must meet the standards:

ATEX - I M1 Ex ia I Ma, II 1G Ex ia IIC T3 Ga, I M2 Ex d ia I Mb, II 2G Ex d ia IIC T4/T3 Gb;

EN 50104(2002) + A1 (2004) O2;

EN 45544 CO и H2S;

EN 60079-29-1:2007 Methan- nonane;

EN 50271

**Quantity: 1 pc.**

**Gas Analyzer N2**

A multifunctional portable gas meter, which ensuresdetermination of the inflammatory, explosive and toxic gasses: **O2**, **H2SCO2, CO, CH4, SO2** concentrations in the air of a mine.

* Dimensions, no more than: length 130 mm, width 48 mm, height 44 mm
* Weight, no more: 220-250 g
* Operation temperature limits: -200C +50 0C;
* Pressure: 70-130 KPa;
* Relative humidity: 10-95%;
* Protection class: IP 67;
* Alarm signal: visual 3600; audio – no less than 90 db;
* Duration of operation no less than: 12 h.
* Charging time: 4h

Must meet the standards below:

ATEX - I M1 Ex da ia I Ma II 1G Ex da ia IIC T4/T3 Ga;

IECEx - IECExEx da ia I Ma Ex da ia IIC T4/T3 Ga

EN 50104(2002) + A1 (2004) O2;

EN 45544 CO и H2S;

EN 60079-29-1:2007 Methan- nonane;

EAC PO Ex ia I Ma X 0Ex ia IIC T4/T3 Ga X.

**Quantity: 1pc.**